

CLAIMS

1. A sensor for determining the angular position of a radiating point source in two dimensions, comprising:

- a) a point source of light located in a prescribed space;
- b) a light detector adjacent said space;
- c) a two dimensional mask interposed between said detector and said space, said mask having a two dimensional pseudo-random surface pattern defining a prescribed degree of transmissivity;

- d) whereby light from said source travels through said mask and onto said detector, said surface pattern causing said detector to sense two correlation signal peaks usable to indicate incident angle between said source and detector in two dimensions.

2. The sensor of Claim 1, wherein said surface pattern comprises an analog or continuously varying pseudo-random sequence of V-shapes.

3. The sensor of Claim 1, wherein said surface pattern comprises analog or continuously varying pseudo-random transmissivity components.

4. The sensor of Claim 1, wherein said surface pattern comprises digital or discretely varying pseudo-random transmissivity components.

5. The sensor of Claim 1, wherein said surface pattern comprises a plurality of V-shapes.

6. The sensor of Claim 5, wherein at least some of said V-shapes overlap one another.

7. The sensor of Claim 6, wherein non-overlapping portions of said pattern have a first degree of transmissivity and overlapping portions of said pattern have a second degree of transmissivity.

8. The sensor of Claim 7, wherein said second degree is greater than said first degree.

9. The sensor of Claim 8, wherein said first degree comprises 50% transmissivity.

10. The sensor of Claim 8, wherein said second degree comprises 100% transmissivity.

11. The sensor of Claim 9, wherein said second degree comprises 100% transmissivity.

12. The sensor of Claim 1, wherein said mask is rectangular.

13. The sensor of Claim 1, wherein said detector comprises a charge coupled device (CCD).

14. The sensor of Claim 12, wherein said detector comprises a charge coupled device (CCD).

15. The sensor of Claim 12, wherein said mask extends laterally of said detector.

16. A sensor for determining the angular position of a radiating point source in two dimensions, comprising:

- a) a point source of light located in a prescribed space;
- b) a light detector adjacent said space;
- c) a two dimensional rectangular mask interposed between said detector and said space, said mask having a two dimensional pseudo-random surface pattern defining a prescribed degree of transmissivity, said surface pattern comprising a plurality of V shapes at least some of which partially overlap one another;

d) whereby light from said source travels through said mask and onto said detector, said surface pattern causing said detector to sense two correlation signal peaks usable to indicate incident angle between said source and detector in two dimensions.

17. The sensor of Claim 16, wherein non-overlapping portions of said pattern have a first degree of transmissivity and overlapping portions of said pattern have a second degree of transmissivity.

18. The sensor of Claim 17, wherein said first degree comprises 50% transmissivity.

19. The sensor of Claim 17, wherein said second degree comprises 100% transmissivity.

20. The sensor of Claim 18, wherein said second degree comprises 0% transmissivity.

21. The sensor of Claim 16, wherein said detector comprises a charge coupled device (CCD).

22. The sensor of Claim 16, wherein said mask extends laterally of said detector.